

ROCKY FLATS PLANT, FILTER TEST LABORATORY  
AND WAREHOUSE  
(Building 42) (Building 442)  
SE corner of Centrel Ave. & Fifth St.  
Golden vicinity  
Jefferson County  
Colorado

HAER No. CO-83-AG

HAER  
COLO  
30-GOLDV  
1AG-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD  
National Park Service  
1849 C St. NW  
Washington, DC 20240

# HISTORIC AMERICAN ENGINEERING RECORD

## ROCKY FLATS PLANT, FILTER TEST LABORATORY AND WAREHOUSE

(Rocky Flats Plant, Building 442)  
(Rocky Flats Plant, Building 42)

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**Location:** Rocky Flats Environmental Technology Site, Highway 93, Golden, Jefferson County, Colorado. Building 442 is located at the southeast corner of the intersection of Central Avenue and Fifth Street.

**Significance:** Building 442 is a secondary contributor to the Rocky Flats Plant historic district, associated with the United States (U.S.) strategy of nuclear military deterrence during the Cold War, a strategy considered of major importance in preventing Soviet nuclear attack. Building 442 was one of the original Plant structures, built in 1953. It was originally used to launder protective clothing used by employees in the Uranium-handling areas of Building 444. Later, the structure included a filter-testing laboratory and storage area for high efficiency particulate air filters and respirator cartridges. The filter-testing laboratory performed tests on both respirator and equipment-mounted high efficiency particulate air filters.

**Description:** Building 442, originally known as Building 42, is a one-story, rectangular-shaped structure that was built in two phases. Completed in 1953, the original building is a cast-in-place reinforced-concrete structure and encompasses approximately 2,480 square feet. The newer portion, completed in 1975, is a pre-engineered metal building and encompasses approximately 5,420 square feet. The floor of the building consists of two rectangular sections with overall dimensions of 86' (north-south) x 127' (east-west), and total floor area of approximately 7,900 square feet.

The original structure is constructed of corrugated metal walls and has a flat roof. The windows are multi-paned with metal sashes, arranged in sets of three. The west, south, and north exterior concrete walls each have two window sets; the east wall has one set. The floor is an on-grade slab with vinyl-asbestos tile finish. Partition walls are concrete masonry and fiberboard. The filter laboratory is housed in this section of the building.

The newer part of the building contained the warehouse operation for the staging of filters for the filter test laboratory. Incoming filters that needed to be tested were stored until testing was completed. Filters that had been tested were repacked and stored for distribution.

The structure is constructed of rigid tapered-steel bents with no interior columns. Purlins, girts, and wind columns are constructed of cold-formed steel. The exterior wall and roof sheeting are ribbed metal with fiberglass insulation. The roof slopes down to the north and south from the centerline. The floor is an on-grade slab. Interior partitions are gypsum board over metal studs and prefabricated modular units. A loading dock is located in the southwest corner.

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History: Building 442 was originally used to launder uranium-contaminated protective clothing from Building 444. Protective clothing included coats, pants, hats, underwear, socks, and booties provided by the Atomic Energy Commission and later by the U.S. Department of

Energy (USDOE). When Building 442 operations changed to filter testing, laundry operations were moved to Building 778.

The final use of the structure included a filter-testing laboratory and storage area for high efficiency particulate air filters and respirator cartridges. The filter-testing laboratory performed tests on both respirator and equipment-mounted high efficiency particulate air filters. Radioactive sources were used in some of the test equipment.

Sources: Colorado Department of Health. *Project Tasks 3 & 4 Final Draft Report. Reconstruction of Historical Rocky Flats Operations and Identification of Release Points (1992)*, by ChemRisk. Rocky Flats Repository. Golden, Colorado.

United States Department of Energy. *Historical Release Report (HRR) (1994)*, by EG&G. Rocky Flats Plant Repository. Golden, Colorado, 1994.

United States Department of Energy. *Final Cultural Resources Survey Report (1995)*, by Science Applications International Corporation. Rocky Flats Repository. Golden, Colorado, 1995.

Historians: D. Jayne Aaron, Environmental Designer, engineering-environmental Management, Inc. (e<sup>2</sup>M), 1997. Judith Berryman, Ph.D., Archaeologist, e<sup>2</sup>M, 1997.